PYTHON CODING TEST

Please write your code and SQL as though you were submitting it for production use. If you haven't written code professionally before, that's OK, just apply the best practices you've acquired! The level of effort applied is equally important to how well your code functions.

Libraries are allowed. If you use libraries, please provide installation instructions. e.g. pip install boto. Please also specify the version of Python used, e.g. 2.7.10 or 3.6.0.

Database Design

Design a set of SQL tables for a blog. Include users, comments, blog posts, and any other objects you feel are relevant. Please include comments for fields that might be unclear. MySQL is the ideal database to target, but if you're not familiar with it, others are also acceptable.

API Interaction

Using http://jsonplaceholder.typicode.com, write a script to get the most recent N number of TODOs, where N may be any number. The script must also be able to create a TODO and delete a TODO given an ID.

Algorithms

Write a script which prints all the permutations of a string in alphabetical order. We consider that digits < upper case letters < lower case letters. The sorting should be performed in ascending order.

Your program should accept a file as its first argument. The file contains input strings, one per line. Print to stdout the distinct permutations of the string separated by comma, in alphabetical order.

Contents of sample input file:
hat abc Zu6 T AA

Expected output for the input above:

aht,ath,hat,hta,tah,tha
abc,acb,bac,bca,cab,cba
6Zu,6uZ,Z6u,Zu6,u6Z,uZ6
T
AA

Hints for completing these projects:
- Try to demonstrate your best software development skills, don't just to solve the problems as presented
- Design your code or solution as if it is part of an application or micro-service